

Notice of Allowability

Application No.

09/646,984

Applicant(s)

RUBINGH ET AL.

Examiner

William W. Moore

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 17 June 2004 and the interview conducted 11 August 2004.
2. ☒ The allowed claim(s) is/are 1,2,11,14-16,18,20,22,24,26,27,29-31,33 and 34.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20040811</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Cancel claims 17, 19, 23, 25, 28, and 32.

Rewrite claims 1, 15, 16, 24, 27, 29, 33, and 34, as filed June 17, 2004, in the amendment after final rejection, thus:

Claim 1. (Amended) A variant of a microbial serine protease having a modified amino acid sequence of a wild-type amino acid sequence, wherein the modified amino acid sequence comprises a deletion of an amino acid at one or more of positions that correspond to one or more of positions 70 and 75-82 of the amino acid sequence of subtilisin BPN' as set forth in SEQ ID NO:1.

Claim 15. (Amended) A variant according to Claim 1 selected from the group consisting of:

- (a) Δ 70₇ and Δ 75-82;
- (b) Δ 75-82;
- (c) Δ 70, Δ 78₇ and Δ 79;
- (d) Δ 70;
- (e) Δ 75;
- (f) Δ 76;
- (g) Δ 78;
- (h) Δ 79;
- (i) Δ 81; and,
- (j) Δ 82.

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Claim 16. (Amended) A variant according to Claim 15 selected from the group consisting of:

- (a) Δ 70₇ and Δ 75-82;
- (b) Δ 75-82;
- (c) Δ 70, Δ 78₇ and Δ 79;
- (d) Δ 70;
- (e) Δ 78; and
- (f) Δ 79.

Claim 24. (Amended) An aqueous personal care composition comprising:

- (a) a variant of a microbial serine protease having a modified amino acid sequence of a wild-type amino acid sequence, wherein the modified amino acid sequence comprises a deletion of an amino acid at one or more of positions that correspond to one or more of positions ~~70-84~~ 70 and 75-82 of the amino acid sequence of subtilisin BPN' as set forth in SEQ ID NO:1; and,
- (b) a personal care composition carrier.

Claim 27. (Amended) A mutant microbial serine protease gene encoding the variant according to claim 1.

Claim 29. (Amended) A variant of a microbial serine protease having a modified amino acid sequence of a wild-type amino acid sequence, wherein the modified amino acid sequence comprises a deletion of an amino acid at one or more of positions that correspond to one or more of positions ~~70-84~~ 70 and 75-82 of the amino acid sequence of subtilisin BPN' as set forth in SEQ ID NO:1, ~~wherein the variant is not Δ 75-83 or Δ 74,~~ wherein the variant further comprises one or more stabilizing mutations selected from the group consisting of I107V, K213R, Y217L, ~~Y217K,~~ N218S, G169A, M50F,

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Q19E, P5A, S9A, I31L, E156S, G169A, N212G, S188P, T254A, S3C+Q206C, and Q271E, and wherein at least one stabilizing substitution is Y217L.

Claim 33. (Amended) A variant according to Claim 29 selected from the group consisting of:

- (a) ~~(k)~~ Δ 70₇ and Δ 75-82;
- (b) ~~(l)~~ Δ 75-82;
- (c) ~~(m)~~ Δ 70, Δ 78₇ and Δ 79;
- (d) ~~(n)~~ Δ 70;
- (e) ~~(o)~~ Δ 75;
- (f) ~~(p)~~ Δ 76;
- (g) ~~(q)~~ Δ 78;
- (h) ~~(r)~~ Δ 79;
- (i) ~~(s)~~ Δ 81; and,
- (j) ~~(t)~~ Δ 82.

Claim 34. (Amended) A variant according to Claim 29 selected from the group consisting of:

- (a) Δ 70₇ and Δ 75-82;
- (b) Δ 75-82;
- (c) Δ 70, Δ 78₇ and Δ 79;
- (d) Δ 70;
- (e) Δ 78; and
- (f) Δ 79.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Laura L. Frieko on August 11, 2004.

The following is an examiner's statement of reasons for allowance:

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The examiner's amendment limits the descriptions of positions for deletion in a serine protease variant in the independent claims 24 and 29 to the description of positions for deletion in a serine protease variant in the independent claim 1 indicated to be allowable over the prior art in the advisory action mailed July 22, 2004. Claims 1, 24, 27, and 29 are further amended to indicate the overall source of serine proteases amenable to the deletions, where the term "microbial" embraces both bacterial proteases, e.g., from bacilli and other prokaryotes, and fungal proteases, such as the proteinase K and thermolysin proteases, and amended as well to clarify their intended subject matters by providing a definite recitation of a specific amino acid sequence, SEQ ID NO:1 herein, as the basis for determining corresponding amino acid positions in serine proteases other than the mature subtilisin BPN'. Claim 29 is also amended to clarify its intended subject matter by removing the contradiction between the requirement for particular stabilizing substitution, Y217L, in each variant serine protease and the inclusion of a conflicting substitution at the same position, Y217K, now deleted from claim 29. Claims 17, 19, 23, 25, 28, and 32 are deleted because they exceed the scope of claims 1, 24 and 29, from which they had depended. Finally, claims 15, 16, 33 and 34 are amended to clarify the distinct, correspondent, sets of positions for deletion that are not single or contiguous and to revise the format of claim 33 in listing positions for alternative single and multiple positions for amino acid deletions.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William W. Moore whose telephone number is now 571.272.0933. The examiner can normally be reached between 9:00AM and 5:30PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can now be reached at 571.272.0928. The fax phone numbers for all communications for the organization where this application or proceeding is assigned remains 703.872.9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is now 571.272.1600.

William W. Moore
August 11, 2004



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